A LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Original) A flat panel display comprising:

a plurality of pixels, each pixel including a plurality of sub-pixels, and each sub-pixel comprising a self-luminescent element; and

driving thin film transistors, wherein each thin film transistor has a semiconductor active layer with a channel region electrically connected to each of the self-luminescent elements to supply current to each of the self-luminescent elements, wherein the channel regions of the semiconductor active layer in at least two sub-pixels are arranged in different directions.

2. (Original) The flat panel display of claim 1, wherein the sub-pixels have different colors.

3. (Original) The flat panel display of claim 2, wherein the channel regions in the sub-pixels of different colors are arranged in different directions.

4. (Original) The flat panel display of claim 1, wherein the different directions of the channel regions are determined by an amount of current flowing in the self-luminescent element of the sub-pixels of different colors when a substantially identical driving voltage is applied to the sub-pixels of different colors.

5. (Original) The flat panel display of claim 1, wherein the different directions of the channel regions are determined by different mobility values of the channel regions of the driving thin film transistors of the sub-pixels of different colors.

6. (Original) The flat panel display of claim 1, wherein the semiconductor active layers are formed of polycrystalline silicon.

7. (Original) The flat panel display of claim 6, wherein the polycrystalline silicon has anisotropic grains.

8. (Original) The flat panel display of claim 6, wherein the different directions of the channel regions are determined by directions of grain boundaries of the polycrystalline silicon of the channel regions.

9. (Original) The flat panel display of claim 8, wherein the different directions of the channel regions are determined so that angles made by a direction of current flow in the channel regions of the sub-pixels of different colors and the grain boundaries of the polycrystalline silicon of the channel regions are proportional to an amount of current flowing in the sub-pixels of different colors when an identical driving voltage is applied to the sub-pixels of different colors.

10. (Original) The flat panel display of claim 9, wherein the different directions of the channel regions are determined so that the angles made by the direction of current flow in the channel regions of the sub-pixels of different colors and the grain boundaries of the

polycrystalline silicon of the channel regions are proportional to mobility values of the channel regions.

11. (Original) The flat panel display of claim 6, wherein the polycrystalline silicon is formed using a solidification method involving a laser.

12. (Original) A flat panel display comprising:

a plurality of pixels, each pixel including a red sub-pixel, a green sub-pixel and a blue sub-pixel, each sub-pixel comprising a self-luminescent element; and

driving thin film transistors, wherein each thin film transistor has a semiconductor active layer having a channel region connected to the self-luminescent elements of the sub-pixel in order to supply current to the self-luminescent element, wherein the channel regions of the semiconductor active layers in at least two different colored sub-pixels are arranged in different directions.

13. (Original) The flat panel display of claim 12, wherein the different directions of the channel regions are determined by an amount of current flowing in the self-luminescent elements of the in at least two different colored sub-pixels when a substantially identical driving voltage is applied to the said sub-pixel of different colors.

14. (Original) The flat panel display of claim 12, wherein the different directions of the channel regions are determined so that a current of a smallest amount flows in the self-luminescent elements of the green sub-pixels.

15. (Original) The flat panel display of claim 13, wherein the different directions of the channel regions are determined so that the amount of current in the self-luminescent elements of the red sub-pixels is greater than the amount of current in the self-luminescent element of the green sub-pixels.

16. (Original) The flat panel display of claim 12, wherein the different directions of the channel regions are determined by mobility values of the channel regions of the driving thin film transistors of the red sub-pixels, the blue sub-pixels and the green sub-pixels.

17. (Original) The flat panel display of claim 16, wherein the different directions of the channel regions are determined so that the channel region of the semiconductor active layer of the driving thin film transistors of a green sub-pixel has the smallest mobility value.

18. (Original) The flat panel display of claim 16, wherein the different directions of the channel regions are determined so that the mobility values of the channel regions of the driving thin film transistors decrease in the sequence of red, blue, and then green sub-pixels.

19. (Original) The flat panel display of claim 12, wherein the semiconductor active layers are formed of polycrystalline silicon.

20. (Original) The flat panel display of claim 19, wherein the polycrystalline silicon has anisotropic grains.

21. (Original) The flat panel display of claim 19, wherein the different directions of the channel regions are determined by the directions of grain boundaries of the polycrystalline silicon of the channel regions.

22. (Original) The flat panel display of claim 21, wherein the different directions of the channel regions are determined so that an angle made by a direction of current flow in the channel region of a green sub-pixel and a grain boundary of the polycrystalline silicon of the channel region of the green sub-pixel is greater than angles made by a direction of current flow in the channel regions of the red and blue sub-pixels with grain boundaries of the polycrystalline silicon of the channel regions of the red and blue sub-pixels.

23. (Original) The flat panel display of claim 21, wherein the different directions of the channel regions are determined so that an angle made by a direction of current flow in the channel region of a red sub-pixel and a grain boundary of the polycrystalline silicon of the channel region of the red sub-pixel is smaller than angles made by a direction of current flow in the channel regions of the green and blue sub-pixels with grain boundaries of the polycrystalline silicon of the channel regions of the green and blue sub-pixels.

24. (Original) The flat panel display of claim 21, wherein the different directions of the channel regions are determined so that an angle made by the channel region of a sub-pixel and a grain boundary of the polycrystalline silicon of the channel region of the driving thin film transistor of the sub-pixel decreases in sequence of green, blue, and then red sub-pixels.

25. (Original) The flat panel display of claim 19, wherein the polycrystalline silicon has primary grain boundaries parallel to one another and side grain boundaries each approximately

perpendicular to the primary grain boundaries and located between adjacent primary grain boundaries.

26. (Original) The flat panel display of claim 25, wherein the different directions of the channel regions are determined with respect to the direction of the primary grain boundaries of the polycrystalline silicon of the channel regions.

27. (Original) The flat panel display of claim 26, wherein the different directions of the channel regions are determined so that an angle made by the direction of current flow in the channel region of a green sub-pixel and a primary grain boundary of the polycrystalline silicon of the channel region of the green sub-pixel is smaller than angles made by the current-flowing direction at the channel regions of the red and blue sub-pixels with the primary grain boundaries of the polycrystalline silicon of the channel regions of the red and blue sub-pixels.

28. (Original) The flat panel display of claim 26, wherein the different directions of the channel regions are determined so that an angle made by the direction of current flow in the channel region of a red sub-pixel and a primary grain boundary of the polycrystalline silicon of the channel region of the red sub-pixel is greater than angles made by the direction of current flow in the channel regions of the green and blue sub-pixels with grain boundaries of the polycrystalline silicon of the channel regions of the green and blue sub-pixels.

29. (Original) The flat panel display of claim 26, wherein the different directions of the channel regions are determined so that an angle made by the direction of current flow in the channel region of a sub-pixel and a primary grain boundary of the polycrystalline silicon of the channel region of the sub-pixel increases in sequence of green, blue, and then red sub-pixels.

30. (Original) The flat panel display of claim 26, wherein the direction of current flow in the channel region of each of the green sub-pixels is parallel to a primary grain boundary of the polycrystalline silicon of the channel region.

31. (Original) The flat panel display of claim 26, wherein the direction of current flow in the channel region of each of the red sub-pixels is perpendicular to a primary grain boundary of the polycrystalline silicon of the channel region.

32. (Original) The flat panel display of claim 19, wherein the polycrystalline silicon is formed using a solidification method using laser.